WHIRRAKEE

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MONTHLY NEWSLETTER OF THE BENDIGO FIELD NATURALISTS CLUB

Bendigo Field Naturalists Club Inc.
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Membership of the Bendigo Field Naturalists Club is open to all those interested in Natural History. The subscription rates are: Single $40; Family $50; Concession: Single $35; Family $40. *Whirrakee* subscription only is $40.

General meetings are held on the second Wednesday of each month. The venue for General meetings is the Golden Square Senior Citizens Building, Old High Street, Golden Square. The meeting starts with a 10 minute thing-of-the night natural history segment. The invited speaker starts at 8:00pm and meetings conclude with supper. The Annual Meeting is held in September.

Committee meetings are held on the third Wednesday of each month at 5:30pm. Members of the Committee are the Office Bearer listed above and the following members: Anne Bridley, Kerrie Norris, John Lindner, Jenny Shield, Diana Collier, Devi Shanty

Excursions are conducted regularly and are advertised on the diary page of the *Whirrakee*. The assembly point for excursions is the Golden Square Senior Citizens Building, unless otherwise specified. Several interclub field naturalist campouts are held every year.

The Bendigo Field Naturalists Club is actively involved in local conservation issues. An **indigenous garden** has been established around the Golden Square Senior Citizens Building. Working bees are advertised on the *Whirrakee* diary page.

Bird Observing: Club members conduct regular bird surveys. Please contact Anne Bridley 5442 6188 or Glenise Moors 5439 6254 for details. Special bird observations should be reported to Anne Bridley 5442 6188. To propose bird observing excursions please contact Kerrie Norris 5447 8017.

Front cover photo?...see page 2

WHIRRAKEE

Monthly Newsletter of the Bendigo Field Naturalist Club

Vol. 35, No. 3, April 2014

Whirrakee takes its name from the Whirrakee Wattle (*Acacia williamsonii*), which is virtually endemic to the Bendigo region

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Authors are responsible for the accuracy of the information they use and also for any opinions expressed in their articles. Contributions should be posted or e-mailed to the editor at least two days prior to the last Wednesday of the month. They will be included as soon as possible after they are received, although space restrictions occasionally require shortening of articles or holding them over till the following edition of *Whirrakee*.

Articles in *Whirrakee* may be reproduced, but permission should be obtained from the Bendigo Field Naturalists Club, and acknowledgment should be given to the author and the Club. Some back issues are still available on request.

Editor's Note

I was very inspired by my recent attendance at the Family Nature Club. It was the first time for quite a while, and it was wonderful to see how smoothly it operated, how much work Felicity and Nicole had put into the preparation and how switched on the children and parents were. I imagine that Richard Louv, who recently spoke in Melbourne about the new (or renewed) movement to get children involved with nature might be very encouraged by our Family Nature Club as a vehicle to connect children to nature. Nicole Howie attended Richard's talk, but there was no room to give a summary of the philosophy in this edition (hopefully another time though). There was also no room to give a summary of John Lindner's very interesting talk about his trip(s) to the Flinders Ranges. My apologies for these ommissions, but really, it is nice to have plenty of material to fill the pages of the Whirrakee. Please take note of the small item on page 3 with regards to the May edition.

Front page photographer: Joy Clusker

These happy images are from the Family Nature Club's last excursion to No 7 Park where a 'bugblitz' was the theme of the day. There are more photos on pages 6 and 7.

Short Notices

BFNC – Monthly excursion – April 2014

Date: Sunday 13 April 2014 (whole day)
General area: Kamarooka section of Greater Bendigo National Park
Specific locations: Millwood Dam, Campbells' Dam, mallee areas in between
Attractions: Bird-watching at the dams and in the mallee. Also any early flowering plants, such as Blue Mallee.
Excursion plan: We will spend some time around Millwood Dam itself, with a break for morning tea. We will then walk to Campbell's Dam. This is 3.0 km along an easy track, making 6.0 km total return. The pace will be slow. We will have lunch on the way or at the dam. Depending on group desire, we could return a slightly different way.
If there is time and people wish to, we could travel a little further north to Mulga Dam.
Organiser: John Lindner, 5448 3406
There is no need to notify me of your intention to come.
Leaders: John Lindner, Anne Bridley
Distance: The driving distance from Bendigo to Millwood Dam is 30 kilometres. So the return journey will be about 60 kilometres for Millwood Dam.
Fuel contribution: We will aim to carpool as much as possible. Passengers should be prepared to contribute about $5-10 to cover the cost of fuel of the car they travel in.
Meeting time: 9.00 am at the clubrooms in Golden Square
Duration: We should be back in Bendigo no later than 4.00 pm.
Please bring Warm, waterproof clothing, walking boots or sturdy shoes, lunch, morning and afternoon tea, water, backpack, camera, binoculars.
Please accept our apologies for not having more advance notice of this excursion.

Contributions to May *Whirrakee*

As your normal editor will be absent for the next few weeks, **please note that any contributions for the May *Whirrakee* need to be sent to Richard Goonan or Gemma Candy**
e-mail: richard.goonan@optusnet.com.au

New BFNC website

The Bendigo Field Naturalists Club has a new website! Check it out at
www.bendigofieldnaturalists.asn.au
The site currently outlines who we are, what we do and what we have published over the years. It also allows people to let us know what they have observed and contact us with questions and membership enquiries, etc. We are currently working on adding other pages and functionality to make it even better. If you have any suggestions for development or content (text and images) send them through to info@bendigofieldnaturalists.asn.au

And there is an enquiry aleady…
Naomi Townsend sent an email through the contact form on the club's (new) website asking if BFNC had any information on the **California Gully Bushland Reserve**. She is writing a management plan for the reserve and is looking for any information on the history or management issues of the reserve and photos or maps. If you can help please contact Naomi at
gnome311973@yahoo.com.au and please cc BFNC at: info@bendigofieldnaturalists.asn.au

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Upcoming BFNC Anniversary

Next year (2015), our club will reach the amazing milestone of 70 years of existence. The committee has had some preliminary discussion about how the occasion could be celebrated, perhaps through a dinner as we have held in the past and possibly an exhibition of club memorabilia.
The committee felt that as there would be considerable work involved there should be a special sub-committee formed to oversee this. We are calling on any members who may have a special interest in the clubs' history and in organising such an event to consider joining the sub-committee. We are also keen to hear members' thoughts on how the occasion could be celebrated. Please contact any of the committee members if you are interested.

A glimpse of nature at White Hills...photos and captions by John Lindner see article on page 9 this month. The article continues (possibly next month) and some of the birds shown here are listed in this upcoming Part 2.

Top left:
A White Cockatoo, one of a group of 5 birds, which got very excited about finding the hole in the Blue Gum, June 2012.

Top right:
The Galahs at the nest hole in in the dead Blue Gum in Ross Street, July 2012.

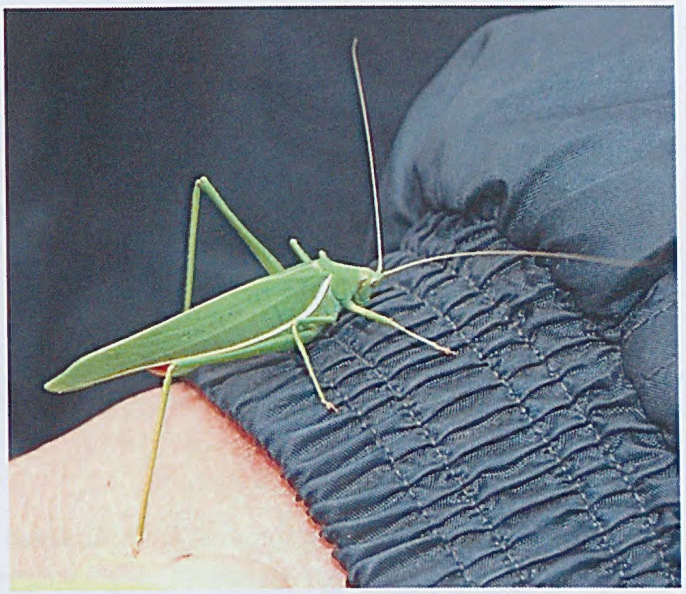
Left:
A young Red Wattlebird foraging amongst the dense flowers of an *Eremophila racemosa X maculata* (a cultivated cross between one species which has no common name and Spotted Emu-bush)

Below:
The upper branches of the dead tree with their vertical prongs and the lower arching branch.

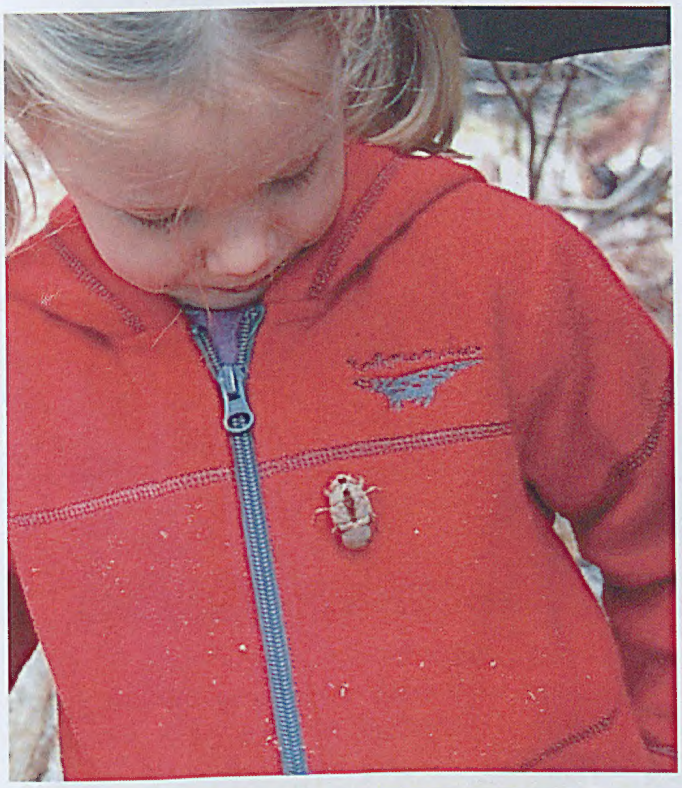
Family Nature Club activity, Sunday 16th March, Crusoe Reservoir No 7 Park

This was a 'bug-blitz' led by Nicole Howie (speaking in above photo) and Felicity Nicholls (standing on Nicole's right)
Sometimes it was hard to see who got more excited, the children or their parents!

It was a great morning.
(top photo by Joy Clusker)



More wonderful insects from the Family Nature Club outing…and Flora Hill (lower two)
(photos by Joy Clusker and Sabine Wilkens)



The two lower photos on the previous page show an immature katydid or tree cricket. It was spotted by the Smith family in Flora Hill on March 10. The adult form will look something like the top right picture on the previous page but perhaps more colourful? Any clues as to its name?

The above beetle was pictured in last month's *Whirrakee* as an unknown. Thanks to Jenny Shield, we now have a name for it: It is a green and black fiddler beetle *Eupoecila australiasiae*.

Some early fungi from the Bendigo Botanic Gardens (Photos taken in February by Joy Clusker)

Yellow stainer *Agaricus xanthodermus*

Giant puffball *Calvatia gigante*

Slime mould *Fuligo* sp

Book Review by John Lindner

Spider silk – evolution and 400 million years of spinning, waiting, snagging and making
Leslie Brunetta and Catherine Craig, CSIRO Publishing, Melbourne, 2010
Bendigo Library 595.4 BRU

I insist on receiving some acclamation for dealing with such a book, because I have been a timorous arachnophobe all my life. It's really only the big, hairy, flat Huntsmen spiders that scuttle in that disgusting way for which I have the absolute horrors. I'm quite sweetly inclined towards most others - Orb Weavers, Wolf Spiders, Red-backs, Jewell Spiders. However I did make the mistake of acquiring a large book on Australian spiders years ago, and I can hardly open it - the pictures of the hairy ones leap out at you. I can just about cope with Jenny Shield's field guide "Spiders of Bendigo", certainly an essential part of the topic. But one about evolution and behavior provides a whole new depth - this book will compel your admiration for spiders and for their successful survival strategies.

Joint authorship between a scientist, upon whose original larger study this smaller book is based, and a journalist, can be a very fruitful enterprise. In this case, some very complex concepts and processes are clearly explained. This is done with the aid of excellent stick diagrams (eg. evolutionary tree of spiders, taxonomy of spiders, amino acid sequences in silk proteins), pictorial diagrams (eg. types of spider fangs), black and white photos (eg. electron microscope images of cribellate catching silk and spinnerets), colour photos and a glossary of terms. There are no large pictures of big, hairy monsters, so it's nightmare free.

The book is basically about the evolution of spiders as a very large, diverse group, and in particular the evolution of various forms of silk and the uses to which it can be put: catching prey, evading predators, travelling on the air, egg protection. Spiders began to evolve around 380 million years ago. They have become a very successful group of Arthropods (animals with joined appendages). Some earliest ancestors were Trigonotarbids, a very successful line which did not produce silk, and now extinct. The oldest surviving suborder is the Mesothelae, burrow-inhabiting spiders now confined to South-east Asia, which have tergites (plates) on the abdomen and spinnerets positioned beneath it. Another surviving order which evolved early on was the Mygalomorphs – they produce silk from spinnerets located at the end of abdomen. And then finally are the more recently evolved groups of Orb-weavers which construct the classic, vertically-positioned, round webs with spokes and catching spirals. Orb webs can also be horizontal. The Orb-weavers comprise a very large group.

Evolution, for all that has almost become a dogma, is quite a huge concept and difficult to explain in a succinct way. This is achieved admirably in 13 pages near the start, and added to progressively throughout as necessary. For it is not only the evolution of spider morphology and species, but the all-important evolution of the ability to produce silk that this book addresses. Indeed the key role of evolution in the whole topic is the underlying "sub-plot".

Spider silk is a substance made of proteins and produced in special glands. It begins as a fluid, and hardens to various degrees of flexibility on contact with air. The silk is extruded through spinnerets, teat-shaped projections clustered together at the rear of the abdomen. There are many kinds of silk, and a spider can produce several with specific functions, each from a different spinneret: major ampullate silk is for very strong draglines from which a spider can hang when it jumps into the air; minor ampullate silk is used to add to major ampullate lines and for temporary spirals in orb webs; cribellate silk is only produced by Araneomorphs (the most accomplished web makers) and is brushed by special bristles into woolly tangles used to catch prey; flagelliform silk is very stretchy stuff which won't break if an insect crashes

into it at high speed; aggregate silk comprises the very sticky droplets on catching spirals; aciniform silk is used especially for egg sacs and prey-wrapping.

Thanks to Jenny Shield for checking this article.
The electron microscope image on the front of the book shows gland-spigots from the spinnerets of one species, through which silk is being secreted.

A glimpse of nature at White Hills (Part 1)

by John Lindner

I have owned my rather modest house in Ross Street, White Hills, since 1993. That 20 years was broken by a 10 year period when I lived with my partner Sue Beattie at her house in Huntly. After Sue died in 2010, I moved back to urban Bendigo. Since then, the house has been subjected to the grand slam of being lifted up and reoriented on the site, renovated and slightly extended. I have once again been able to concentrate on the life and doings of birds, which I see easily from the kitchen and living room areas. These face north and are almost all glass. We had been able to do the same thing at Huntly, since the north and east walls had lots of windows too.

The importance of looking out

Being able to look out of a house has always been a rather important theme in my life. I think it must have started when I was a kid at Mornington, and our rather modern home, built in 1958, had absolutely enormous windows on all sides, protected by very wide, two metre eaves. We could always look out on to the garden with its interesting trees. You could always see something of the sky, clouds or moving leaves. What did I know about birds in those far off days ? – absolutely nothing at all. I did my bird watching on television, through wildlife documentaries, having no concept and no guidance as to what might be otherwise. When I lived at Axedale for a time, it was in a similar low-slung house, which had western views to the golf course with its rather beautiful River Red Gums (*Eucalyptus camaldulensis*). That area was actually part of the Campaspe River flooding zone. So Huntly followed the same theme: Sue used to say it was like bringing the outdoors indoors. At Ross Street, the slight elevation provided by the most northerly of the White Hills, gives modest views over the wooded urban areas to the north and west. You can always see what the weather is bringing.

Feeling close to nature

The strange feeling of being close to nature is surely an important part of what being a field naturalist means. It's not just about objective information such as species lists and habitat descriptions. It's also about our feelings of attachment to what we experience by way of colour, form, sound, activity and aesthetic perception. I think myself that the feeling is mostly illusory, even though it can be very strong at times. What could actually be further removed from nature than a modern 21st century human? But it is a very nice illusion to have.
If the birds, both native and foreigners are foraging in the flowers for nectar or even in the protective mulch (Oh, they are a blasted

nuisance - damn their stinking feathers!), or bathing and drinking avidly in the water you provide, you can feel you have created something which other creatures can use. The scene becomes animated and engaging. And it contributes significantly to your knowledge and understanding.

The birds' favourite tree, a dead and very bare one

At some stage in the past, a large Sugar Gum (*Eucalyptus cladocalyx*), growing right next to the fence in the next door block to the east, was a healthy, flourishing tree. I don't think I took all that much notice of it. But while I was at Huntly it died. Gradually it lost all its foliage and most of the fine twigs, though you would be surprised how many of these remain. This reminds me very much of the thousands of old Snow Gums (*Eucalyptus pauciflora*) on the Bogong High Plains which were destroyed by the huge alpine fires of 2003. Despite the extremes of weather at that altitude, and the regular deposition of ice on the wood, the tough little twiggy stuff at the very extremities has managed to survive another ten years. Eventually I'm sure it will be forced to give up.

My tree has a unique and very pleasing shape. Its lower trunk divides into two main branches, one of which reaches skyward while the other arches over and then comes upward again in a rather lovely twist. I think of it as being a typical piece of vegetative nature – it's all curves and fractal replication, and there are no straight lines. And for myself, a lover of curves and bends and a detester of straight lines, this is truly a work of art. I reckon only a living thing can produce this sort of artefact.

The branches of this tree have become an incredibly important part of the local bird activity. During the day you can often see several species using the tree at the same time, well spaced apart physically of course. And at other times the tree will be completely empty for short periods. You can't actually ask the birds why they are using the tree, but you can draw your own conclusions:

Lookout Scanning the surrounds for predators, such as the Little Falcon and the Brown Goshawk, which pass over at intervals.
Sunbathing Especially on cold mornings, when you can see the birds' feathers fluffed up.
Dozing and resting. Especially if it is still, warm and sunny.
Mating display. Crested Pigeons are the main birds seen doing this.
Brief perch and off again. A common activity, especially by hyper-alert birds such as Indian Mynahs and breeding Starlings which get quite manic.
Wet feathers in showers. Galahs are the main birds seen doing this.
Feeding young. A pair of Mudlarks fed their two young for several weeks with the tree as a base.
Mutual preening Especially Galahs and Crested Pigeons.
Undetermined purpose. What is exactly going on in the mind of a bird at any given moment? We can't know exactly why they are alighting, staying for a while and departing.

Species of birds which use the dead tree

Introduced:
Starling, Indian Mynah, Spotted Turtledove, House Sparrow, Blackbird
Native:
Crested Pigeon, Eastern Rosella, White Cockatoo, Long-billed Corella, Rainbow Lorikeet, Musk Lorikeet, Red-rumped Parrot, Galah, Willy Wagtail, Mudlark, Australian Magpie, Blue-faced Honeyeater, New Holland Honeyeater, Red Wattlebird, White-plumed Honeyeater, Noisy Miner, Little Raven

References

If you Google "dead trees as bird perches" you will come up with quite a few entries, most of which seem to be American, but still quite informative. The principles are still the same.

Part 2 ('Other bird observations in the back garden') will appear in next month's Whirrakee *(space permitting)*

Diary

All Club meetings are held at the Golden Square Senior Citizens Building, Old High St Golden Square, unless otherwise indicated.

Wednesday April 9, 2014 7.30pm

Mr. David Cameron, Senior Botanist, Flora Database Curator & Threatened Species Officer, Knowledge & Decision Systems Branch, Environment and Landscape Performance Division, Department of Environment and Primary Industries, Arthur Rylah Institute for Environmental Research (what a title!!!), will talk about 'When Functional and Linnaean Taxonomies Meet - A preliminary ethnobotanical investigation in the Cordillera Administrative Region of the Philippines'

Family Nature Club

The April 13 meeting is likely to involve the O'Keefe Trail. Please check the website for details.

Registration:

Bendigonatureclub@gmail.com or 5443-1326

http://bendigofamilynatureclub.blogspot.com/

Bendigo Native Plant Group meeting.

All interested people are welcome to come along. Meeting starts at 7:30pm on the third Tuesday of the month, Golden Square Senior Citizens Hall.

Next meeting: 15th of April.

Wildlife Rescue & Information Network Inc.

W.R.I.N. is an organisation dedicated to the care of orphaned, sick or injured native animals. It is fully endorsed by the Dept of Sustainability and Environment.

Please call our Emergency Number for Help for Fauna in Need. Phone: 0419 356433.

WRIN meetings held on the 1st Saturday of the month at 1pm the Golden Square Senior Citizens Hall.

Visitors are very welcome!

SEANA Autumn Camp 2nd-5th May 2014

(for more information contact Matt Comer)

- Hosted by Upper Goulburn Field Naturalists Club at Marysville
- Based at 'Camp Marysville' outdoor education resort, including accommodation, meals, conference facilities etc.
- Accommodation is two bedroom cabins.
- Registration fee ($38pp) is payable by Wednesday 19th February 2014.
- Accommodation and meals must be paid for by Friday 4th April 2014. Full cost of Accommodation and meals if staying for full weekend (3 nights) and all meals is $195pp (plus registration fee).
- The camp will include an interesting exploration of various aspects of the recovery of the area since the devastating 2009 Bushfires and other natural history of the area

Contact; Graham Page, phone 03 5774 7555 or e-mail: grahamvpage@gmail.com

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Tuesday April 8 – Lockwood South 7.30pm Workshop - The Secret Lives of Eucalypts - The Importance of Beneficial Fungi

Eucalypts are a defining part of Australian landscapes. The quintessential gum tree is deeply embedded in Australian culture, identity and life. Although highly resilient and adapted to the extremes of Australia's climate, large numbers of eucalypts in rural areas are in decline. While some fungi can be problematic for eucalypts under certain conditions, many fungi support eucalypts through beneficial symbioses and protection from soil pathogens. Other fungi provide vital nutrients for eucalypts via the decomposition of organic matter. This workshop will examine the role of fungi in soils and their interdependencies with eucalypts. It will address the importance of encouraging relationships between beneficial fungi and eucalypts in local forests, farms and remnant vegetation. Participants are encouraged to bring along fungus specimens. No charge. Supper provided. Bookings: Judy: jcroc22@gmail.com

Have a look at Alison's website http://www.alisonpouliot.com/projects_fungi_ecology.php for other fungal workshops